UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,517	09/16/2003	Sang Yup Lee	Q77445	2292

23373 7590 03/05/2008

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
PROUTY, REBECCA E	
ART UNIT	PAPER NUMBER
1652	
MAIL DATE	DELIVERY MODE
03/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Applicants argue that the rejection of claims 1, 2, 4, 6-9, 11, and 15 under 35 U.S.C. § 103(a) as being unpatentable over Ramirez et al., Lamouse-Smith et al., Martens et al., Swiss-Prot Accession No. P29460, Hatamoto et al. (JP 09/009982) and Koonin et al. should be withdrawn as *cysK* expression does not supplement a precursor of serine-rich protein synthesis or serine synthesis and none of references teach the introduction of the *cysK* Gene in serine-rich protein production systems. However, this is not persuasive as *cysK* expression supplements cysteine and the art clearly suggests that high level expression of human IL-12 p40 would require additional cysteine and that this could be accomplished by expression of *cysK* with human IL-12 p40. As human IL-12 p40 is inherently a serine-rich protein (as well as a cysteine-rich protein) the method suggested by the art meets all limitations of the claims. As applicants claims include increasing production of human IL-12 p40, the rejection shows that the art makes obvious one species within the genus of methods recited by the claims. It is not necessary that the art make obvious all species of the recited genus (i.e., increasing production of every serine-rich protein).

Applicants attempt to clarify that the second sentence in their previous statement that "Lamouse teaches that when an amino acid is present in a recombinant protein at levels

significantly higher than that present in host cellular proteins, the amino acid becomes a limiting factor in expression level. In other words, an increase in specific amino acid level does not directly induce an increase in specific protein production; rather, the production of specific amino acid is inhibited by feedback inhibition regulatory network." means that although the amino acid level in a recombinant protein is significantly higher than that in host cellular proteins and the amino acid becomes a limiting factor in expression level, it does not always mean that the increase of the said amino acid level directly induces the increase of the said recombinant protein production. However, as stated previously the second sentence is NOT a rephrasing of the first. Lamouse teaches that when an amino acid is present in a recombinant protein at levels significantly higher than that present in host cellular proteins, the amino acid becomes a limiting factor in expression level. This clearly means that if the limiting factor is increased expression will increase, as this is the meaning of the term limiting factor. Applicant cannot argue that the words of Lamouse say the opposite of their clear meaning.

Applicants further argue that the examiner's previous statement that a correct statement of what would be expected is "If the level of free cysteine increases intracellularly in the

recombinant host, cellular regulating systems will inhibit cysteine production" is contrary to the disclosure of Hamamoto as Hamamoto uses a *cysE* variant for providing feedback inhibition release. However, this is not contrary to the examiner's statement as Hamamoto is in fact trying to increase the level of free cysteine in the cell, thus requiring a means of alleviating feedback inhibition. However, this is not relevant to the instant situation because the instant situation does not attempt to increase the level of free cysteine but to restore the depletion of cysteine levels caused by the increased demand for the amino acid by recombinant protein production. All available free cysteine is immediately used up and thus cannot produce feedback inhibition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca E. Prouty whose telephone number is 571-272-0937. The examiner can normally be reached on Tuesday-Friday from 8 AM to 5 PM. The examiner can also be reached on alternate Mondays

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nashaat Nashed, can be reached at (571) 272-0934. The fax phone number for this Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Rebecca Prouty/
Primary Examiner
Art Unit 1652